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BY

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PROFESSOR OF MATERIA MEDICA AND MEDICAL JURISPRUDENCE.

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CORRESPONDENCE.

MEDICAL COLLEGE, NOV. 12TH, 1859.

PROF. C. K. WINSTON, M. D.

DEAR SIR—

In accordance with the desire of our fellow students of the Medical Department of the University of Nashville, expressed by acclamation, we, the Committee appointed for the purpose, would respectfully solicit a copy of your "Introductory Address," for publication.

With the assurance that you would confer a great favor by granting this request, we would subscribe ourselves,

Yours most Respectfully,

J. F. ATKINSON, South Carolina,
S. G. WELLBORNE, Mississippi,
T. J. EDWARDS, Missouri,
E. P. NICHOLSON, Alabama,
W. H. DICKERSON, Dis. Columbia,
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A. B. HANNUM, Indiana.

NASHVILLE, NOV. 12TH, 1859.

GENTLEMEN:

My Introductory, which you ask for publication, is at your command.

Please accept for yourselves and the Class whom you represent assurances of my high regard.

Yours, Truly,

C. K. WINSTON.

To Messrs. J. F. Atkinson, S. G. Wellborne, T. J. Edwards. E. P. Nicholson, and others.

INTRODUCTORY LECTURE.

GENTLEMEN:—

Eight years ago I had the honor of delivering an address introductory to the first Course of Lectures in the Medical Department of the University of Nashville. What then might have been regarded as a hesitating promise, has since grown into ample fulfillment; so that the institution now stands second, in point of numbers at least, to but one in the United States. This gratifying result has been secured, mainly, no doubt, by the eligibility of Nashville as a seat of medical learning, and the unanimity with which the enterprise has been sustained by the profession of the South-West. And the Faculty having secured so favorable a verdict from their professional friends, repeat the assurance as formerly made, that nothing in the future shall be done to degrade the institution, or tarnish the dignity of Medical Science. The same spirit which animated them at first, shall animate them to the end.

Passing, however, from these thoughts, which might be greatly extended, I at once call your attention to the subject of this address, which is THERAPEUTICS, or the philosophy of the action of medicine. Liberally construed, it may be defined the art of curing diseases, or the branch of medical science which teaches the just application and modus operandi of medicines. It, therefore, constitutes the useful in medicine. All other branches are merely subsidiary. We study Anatomy, Physiol-

ogy, Pathology and Chemistry, for the sole reason that we may learn to cure diseases. It is true, that, in the investigation of these beautiful sciences much knowledge is secured, and there is much intellectual enjoyment; but of what benefit are they apart from Therapeutics? Therapeutics dates back at a period "whereof the memory of man runeth not to the contrary;" when ignorance of the other branches of medical learning was complete. Who was the first Doctor, or what was the first medical appliance, we may not know. Doubtless the first fit of sickness called him forth, armed, possibly, with a bundle of herbs, the ensign of a profession destined to endure to the end of time. In fact it has been, and must continue to be, one of the necessities of the race. Were all the Doctors killed, and the last vestige of medical knowledge swept from the memory of men, still the first attack of disease would not make its appeal in vain; the "medicine man" would be there, however ignorant and unskilled. The language of pain will always touch the heart of sympathy, reason would soon invoke some measures of relief, and then again would commence the noble science of practical medicine. Men may affect to despise medical knowledge, may look with contempt upon the physician; but how speedily does pain and anguish force them to cry out; how eagerly do they clutch the most nauseous drug promising the least hope of ease.

There is no subject more continuously discussed than the utility of Therapeutics, or practical medicine. The great Napoleon, while he eulogised surgery, and poured unmeasured praises upon Baron Larrey, despised the humble office of his physician, and looked with contempt upon medicine. The one was palpable: he could appreciate the amputation of an arm or the ligation of a bleeding artery. The other was occult: he could not perceive or understand those minute processes by which a dose of medicine dispersed a tumor, or subdued an inflammation. The one could always be done: there was never a failure in the ligature of an artery, or the amputation of a limb. The other not unfrequently failed; tumors and inflammations went on in spite of all medicine. This opinion is not peculiar to Napoleon;

it is a consequence of the utter ignorance of the subject, which is the pregnant source of all empiricism. If men understood medicine there would be an end of quackery. But this can never be. It would not only require that every person should study the elementary principles of medicine, but also that every person should practice medicine. It has been suggested that medicine should be included in the scholastic course; that it should be taught as mathematics, Latin and Greek. But would knowledge thus obtained lessen skepticism or quackery? By no means. It is frequently the case that the best informed are the most gullible—the most easily imposed upon. Quackery must therefore always exist, at least until the medical millennium. Till then let it, like sin, be abhorred and denounced on every suitable occasion, although we may never hope to see the end of either. In the meantime let men take physicians and medicine upon trust, and judge of the one and of the other upon the principles of common sense.

Correct Therapeutics is indispensable to correct practice. We can never hope to cure disease, successfully, unless we understand what disease is. Unfortunately for the masses, and too often for members of the profession, crude and undefined ideas are held upon this subject. Many persons suppose that disease is an entity, a thing, an animal of some kind. And in some of the best authorities we read of medicine spending its influence upon *disease*. A Doctor once asked me where a fever went when it left a man's body. I replied, to the Devil, I supposed, as he is the author of all evil. Now disease is nothing but a condition—a relation. When the various organs of the body are performing their natural functions, we have what is called health; when they fail to do so we have what is called disease. Disease, therefore, in all its multiplied forms, is nothing but perverted or deranged physiology, and the whole object of Therapeutics is to restore the various organs to their normal or healthful action. This fact shows how vastly important it is to study what are called the elementary branches of medicine. Without a knowledge of Anatomy, which teaches the structure

and relation of organs, and Physiology, which teaches the appropriate action of the same organs, how can we ascertain the aberration or disease, or what the proper remedy? It is true much might be learned from observation and experience, without such knowledge, but how meagre in comparison with what it should be.

A great difficulty connected with this subject, as already intimated, is, that the action of medicine is a perfect mystery, especially to the uninformed. Hence priestcraft and witchcraft have been invoked, and a seventh son has been preferred to the most erudite physician. There is nothing in the appearance or the physical qualities of opium, or ipecac., which would indicate that the one would act upon the brain and the other upon the stomach. These facts are only known from observation. And we forget that in medicine, as any where else in nature, for every effect there must not only be a cause, but an adequate cause; and that consequently such medication as can of necessity produce no physiological change, can at all relieve disease, and that the therapeutical effect of a remedy is but the result of its physiological action. This point I think has been greatly obscured by establishing a difference between the therapeutical and physiological effects of remedies. I know that disease modifies the effect of a remedy; but still the tendency of every remedy is to produce the same physiological changes in health as in disease, and it is only by effecting physiological changes that health is restored.

The proposition may be illustrated in this way. The proper physiological action of the liver is to secrete bile. When it fails to do this it is said to be diseased, or its physiology perverted. Now it is a well established fact that the physiological effect of calomel is to stimulate the liver to secrete bile. When therefore calomel is given in that disease which we call torpid liver, and bile is secreted, we are said to cure the disease; or in other words, we secure the therapeuctic effect of calomel. What occurs in this case, occurs in the medication of every conceivable form of disease. So I may repeat that disease being nothing but de-

praved physiology, it follows that the whole scope of Therapeutics consists in correcting such depravity. There is, however, an endless variety in the departure from healthy action, and hence endless variety in the forms of disease. Through the present advanced state of Diagnosis and Nosology, a large proportion of these have been arranged and classified, and for a great many of these appropriate remedies have been designated. Now while diseases are described and known by appropriate titles, and set remedies are prescribed for them accordingly, it would certainly be much better to treat the manifest departures from healthy action, rather than prescribe for a disease which is known merely by its name. For every practitioner must have observed that the same disease requires, in different subjects, under different circumstances and conditions, a different course of treatment. The medical student, therefore, should have his mind well stored with a knowledge of the exact physiology of each organ, so that he may at once recognise every departure, with its peculiarities, from the normal condition. This being gained, he should next familiarize himself with the medicines or remedies which have the power of producing the physiological changes which eventuate in health.

There has been a great deal of discussion, in the medical world, in regard to what are called specific remedies. And as the term is understood, medical men are opposed to the idea. But it is certainly true that all remedies are specific in their action; that is, the same remedy will always, under similar circumstances, produce the same effect. The difficulty consists in our inability to calculate the exact condition. It is this certainty and uniformity of result which constitutes the value of remedies. And I firmly believe the time will come when we shall have a remedy for every disease. Not, however, the same remedy for every disease which may bear a certain name, but a remedy which will correct every known physiological aberration. True medicine is a comprehensive system of electicism. While it sustains no ism, it selects its remedies from air and earth and sea, not, however, without a knowledge of the changes which

they are capable of producing, and the laws governing their action. As for instance, when it has been ascertained that a certain remedy will produce the physiological changes which will cure a case of Ophthalmia, or sore eyes, it will not be maintained that the same remedy would cure every case of sore eyes, as would be done by an ignorant pretender, for the reason that in every case of sore eyes there is not the same physiological aberration. For what would cure one case would ruin another, and hence the absurdity of a universal panacea in any given form of disease. A steam Doctor once treated a shoemaker and a tailor for pneumonia, with the same remedy. The shoemaker recovered, but the tailor died. He learned from this experiment that what would cure a shoemaker would kill a tailor,—a great principle, which, alas! many physicians never learn. In other words, they never learn that remedies are only beneficial when used with an exact knowledge of the condition to be overcome, and the exact physiological changes which they are adapted to produce. They never learn that remedies are influenced by a variety of circumstances, which should always be accurately calculated; such, for instance, as the age, the sex, tho temperament, and above all, the force of the existing physiological aberration, all of which wonderfully modifies their action; so much so indeed, that we are constantly disappointed in the effect of remedies. As, for instance, in croup, six grains of Tartar Emetic may be necessary to affect a child, whereas in other conditions one-fourth of a grain would be ample to accomplish the same result. Bleeding is a good remedy in pleurisy, and yet a man may be so bled as to increase the disease. Quinine will certainly cure intermittent fever, and yet it may be so used as to effect no good whatever.

A further discussion of this subject necessarily involves a consideration of the modus operandi of medicines, or the mode of their action. It has been maintained by high authority that we know nothing upon this subject beyond the mere effects or results of remedies, that the mode of their action is incomprehensible, and that, therefore, our knowledge is altogether empir-

ical. Well, I admit that if by the modus operandi of a remedy is meant the why, the wherefore, the cause of its action, then we do know but little. We certainly shall never be able to tell why an acid will neutralize an alkali, any more than we can why a stone thrown into the air will fall to the ground. But if on the other hand, by the modus operandi of medicines is meant the media through which they act, the laws governing their action, and in not a few instances the reason of those laws, then we know a great deal, and its study, however abstruse and difficult, becomes a subject of the highest consequence. The first consideration upon this part of the subject is, whether it is necessary that a medicine should be introduced into the circulation in order to secure its peculiar effect. It has been contended by high authorities, within the present century, that all medicines act through sympathy; but experiments of the most indubitable character seem to have set this theory entirely aside, so that the philosophy of the present day sustains the opinion, that in order to the display of the characteristic effect of every remedy, it must be absorbed and carried into the current of the circulation. Magendie and other experimenters have proven that if all the parts of an animal's limb be divided except a principal blood-vessel, and Urari poison be injected into the distal extremity, it will produce immediate death. On the other hand if all the parts be divided except a principal nerve, and then the poison be injected as in the other case, no effect whatever is produced, thus showing that while vascular connection is necessary to the action of the poison, nervous connection is not. In addition, when medicines are introduced artificially —by injection into the vascular system, directly, or through the skin—they produce the same effects as when administered in the ordinary way. Again, a large proportion of medicines have been detected in the blood or secretions. I do not wish to be understood as maintaining the doctrine that no effect whatever can be secured by medicine unless it be absorbed. Many articles are used with reference to their capacity to produce a revulsive or counter-irritant effect. That sensations are carried

along the nerves, and an effect produced by reflex action, there can be no question. The attention of the nervous system may thus be called off from one part and concentrated upon another, and otherwise variously influenced, but these results are not characteristic of any particular medicine—many articles entirely dissimilar in general constitution may produce the same effect. As for instance, Mustard will produce counter-irritation, so will Ammonia, Red Pepper, Horse Radish, etc. Articles of this class produce their effect upon the same common principle, that is, the principle of revulsion, and it is not necessary that they should be absorbed. It is true, moreover, that many articles may have their characteristic effects directly upon the nerves of a part, but to gain their general effects they must be absorbed. Thus, opium and belladonna will relieve painful parts, but to gain their general characteristic effects they must be absorbed. So it may now be considered as almost demonstrated, that no medicine produces its peculiar effects, except as above admitted in regard to counter-irritants, unless it gain the current of the circulation, and be brought in immediate connection with the parts which are to be influenced by it. I know that it is maintained that some articles, as Prusic Acid, for instance, acts with too much rapidity for its effects to be accounted for in this way. The experiments of Dr. Blake show that even in the case of Prusic Acid, given to the lower animals, sufficient time elapses for its absorption. But even if the poison does not pass with the ordinary circulation, it may find its way to the parts, to be affected by it, through the fluid in which all the tissues of the body are continually bathed. Again, animals killed with it, and examined immediately thereafter, give forth from every part exposed by the knife, the peach blossom odor peculiar to Prusic Acid. We may, from these considerations, in some instances account for the failure of medicines to produce their customary effects, for the reason that the system may not be in a condition to favor their absorption.

Much light has of late been thrown upon the manner of the absorption of medicines. The great Dr. Chapman in opposing

this idea, maintained that the lacteals, which were regarded as the proper absorbent vessels, enjoyed a secerning power, by which they rejected noxious or unnatural articles. But the discoveries of Deutrochet, in regard to the principle of endosmosis, or the passage of fluids through animal membrane, together with late experiments directly upon the subject, have completely set aside these objections. It has been clearly demonstrated that but few articles of food or medicine enter by the lacteals, but that they pass directly through the basement membrane into the capillary vessels, and thence on through the mesenteric veins into the portal vein, and are thus conducted to the liver. In order that medicines shall enter in this way, they must be dissolved, otherwise they could not pass through a membrane, such as bounds the mucous membrane and the delicate wall of the capillary vessel, which are homogeneous, and in which no interstices have been discovered, even by the highest magnifying power. Now Tiedeman and Gmelin have clearly demonstrated that a majority of medicines are dissolved by the gastric juice, or at least in the process of stomach-digestion, that such as escape solution here, being carried forward, meet with the bile and pancreatic juice, are emulsefied, and pass by the lacteals and venous absorption. The same experimenters have also shown, by the most careful observations, that no medicines can be detected in the chyle, and that consequently medicines, except fats and fixed oils, are admitted into the circulation only through the veins or capillary vessels.

Medicines having gained the current of the circulation, a study of the last importance is, as to how they behave, what do they do, how they do it, and what becomes of them.

Some medicines act upon the blood, changing its relative constituency; others supply a lost material, while others still counteract a morbid process going on in the blood, or neutralize a morbid principle in the blood. As for instance, Calomel, Tartar Emetic, etc., act upon the blood, changing its fibrinous character. Iron, and probably the vegetable tonics, supply a wanting material, while mercury and Iodine counteract a morbid

process. Now a knowledge of these facts, verified by actual experiment, has given a wonderful impetus to such investigations, and in connection with similar physiological enquiries, has given a proper direction to the use of these and kindred remedies. Their action is indisputable, and sets forth in a clear light the value of scientific researches. The empiric, it is true, might cure a case of debility with iron, but he would not comprehend the modus operandi. He would not understand that it is only beneficial in anæmia or poverty of the blood, and that some cases of debility could not be cured with it; in other words, that it cured by supplying a wanting material.

Again, according to the best light, inflammation consists in nothing but the results of a vice of nutrition, in which, amongst other things, there is a rapid increase of the fibrinous portion of the blood. And it has been as clearly proven that certain remedies have the power of lessening this fibrinous or plastic character. Who has not witnessed the most remarkable changes in the shortest time, in certain inflammatory diseases, under the judicious use of mercury and other articles of this class? In their employment there is the highest philosophy.

How it is that mercury, iodine, and similar articles, counteract a morbid process going on in the blood, or neutralize a morbid principle, we may not understand; speculations upon the subject are unsatisfactory. Perhaps we may find out by continuing our researches in this most interesting branch of medical science. Some, as we have seen, are nutural to the blood, and remain in it; others are unnatural, and must be thrown off, and, if the occasion permitted, it would be an interesting enquiry to trace their action still further. They are called Hæmatics.

Other medicines simply use the blood as a medium through which they may approach those portions of the system upon which they are peculiarly adapted to act. Opium, Veratria, and Strychnine display their effects upon the cerebro-spinal nerves. But we have seen that the effect of a medicine cannot be conveyed along the nerves, and hence it is necessary that it should pass along the current of the circulation in order that it may be

continuously addressed to the nerves which are to be affected by it. These articles have all been detected in the blood and secretions. How they produce their effects we do not understand; but, from actual observation, and experiment we have ascertained many of the laws by which their actions are controlled, as well as many antidotes and remedies to their injurious results. Some theories, it is true, have been advanced touching the exact mode of their action; but they are regarded as fanciful, however ingenious. Having produced their effects, being unnatural to the blood, they are thrown off. They are Neurotics.

Other remedies having gained the current of the circulation, and being unnatural to it, are speedily thrown off by the glandular structures. Such are Rheubarb, Colocynth, Alöes, Magnesia, etc. They are eliminative, and hence produce several very important results which may not now be referred to, except that they powerfully stimulate the glands, through which they pass, to increased action.

Another set of remedies passing along the current of the circulation, have the power of contracting and condensing animal fibre. They are astringent. It is thought that they display their effects exclusively upon the muscular fibre, by coagulating its albumen. I can see no reason why they might not have a material influence upon the blood. They are also unnatural to the blood, and must be thrown off. If time permitted it would be interesting to trace their secondary effects also.

We thus have medicines acting upon the blood, upon the nerves, upon the glands, and upon the muscles. For this simple arrangement we are indebted to Dr. Headland, of England, who is justly regarded as the most distinguished and successful investigator of Therapeutics of the present age. It is thought that the action of all the articles of the Materia Medica may be successfully explained by referring them to some one of these classes.

An interesting enquiry arises at this point of the discussion, and that is as to whether changes occur in medicines after their

exhibition, and if so, what are they? That medicines undergo chemical changes, reconstructions, and combinations, under the proper circumstances, there can be no question. A correct knowledge of these changes would account in some instances for those variable results which so often puzzle the practitioner and defeat his object; and a methodical investigation of such changes constitutes one of the most interesting studies connected with practical medicine. From what has been ascertained, already, the hope is cherished that at no distant day the effect of remedies may be calculated with much more certitude than at present. While it is freely admitted that there is an eternal antithesis between vital and chemical laws, still it is not incompatible with the perfect play of the former to conclude that chemical changes may take place in the midst of organized matter. That this is true has been demonstrated in not a few instances. "The free oxygen of the blood may change the general character of all those articles which are subject to oxydation. Sulphuret of potassium may be changed into the sulphate, carbonated drinks may produce the oxalate of lime, and according to Wöhler, the salts of the alkalies with vegetable acids are changed into alkaline carbonates."

Changes of combination occur when, according to Headland, calomel, chalk, magnesia, and metalic oxydes, as well as other insoluble medicines, are taken up in the soluble form, in which only they are capable of acting. The same thing is seen also in the antidotal power of certain articles, whereby the most deadly poisons are at once counteracted and rendered innocuous.

Changes of reconstruction are seen in the conversion of tannic acid, by acquiring oxygen, into gallic acid, of benzoic acid into hyphuric, and of turpentine into volatile oil, thus showing, conclusively, that the article given may soon be changed into something else, which may exert an influence altogether unexpected, sometimes injurious, sometimes beneficial. Your attention is specially directed to the points herein suggested.

For the present advanced state of Therapeutics we are mainly indebted to two principal sciences, physiology and chemistry.

The former surveys the whole realm of organized matter. Commencing with the original cell, it passes on with its various metamorphoses, until it eventuates in the perfection of the individual of which it is the primordeal type. It teaches the minute construction of bone, muscle, blood-vessel, nerve and viscera, with the relations, uses and exact value of each in the complete organism. It demonstrates the methods whereby external and unorganized matter is appropriated to the uses of the economy, together with the minute changes which result in its elimination, thus illustrating those perpetual and definite relations of supply and demand, which are so necessary to the perfection of life. Guided by its wonderful hand we perceive the reason of the difference between the various orders of animated nature, from the mollusk to man, and are thus enabled to negative the philosophy which teaches that "the worm we tread upon feels a pang as great as when a giant dies." It pushes its devious way along the mazy labyrinths of nature, and stands at last in admiration of the vast contrivance and wonderful skill of the great Creator.

But what could physiology do without its handmaid, chemistry? This noble science surveys all the realms of nature. Passing from the inorganic to the organic, it *analyzes the original cell*, and develops the composition of every tissue, whether areolar, muscular or tendenous, serous or mucous, bony or cartilaginous, vascular or nervous. By it the curious process of animal respiration is explained, as well as the combustion going forward in the internal tissues, whereby animal heat is produced and maintained. It shows how the blood is constructed and decarbonized, how and with what materials the body is built up, and what are those metamorphoses by which it is destroyed. In fact, all that we know of the animal economy, except form and motion, are derived from the hand of chemistry. Nor, if we pass from healthy to perverted physiology or disease, are its benefits less important. It has shed a flood of light upon pathology. It teaches what is healthy and what is unhealthy secretion, and thereby suggests the character of remedial agents.

It analyzes morbid products, and points to the perversion which has caused them. It explains the character and effects of surrounding media,—the food we eat, the water we drink, the air we breathe, and the materials which cover and protect our bodies. And if it does not guide the hand of the surgeon, it at least moulds and tempers the instruments by which his wonderful operations are performed.

But chemistry goes still further. It provides the great majority of the remedies which are employed for the relief of disease. And while it teaches neatness in the preparation and administration of remedies, it enables us to combine various articles with advantage, points out incompatibles, and saves us from the disastrous consequences which so often befall the ignorant pretender.

I cannot close this discussion without referring to the great advantage of *à priori* reasoning in Therapeutics. It has been well remarked that to theorize is to think. This exalted prerogative of the mind has, I know, been greatly abused, so much so, indeed, as to offer a vast number of the most disgusting speculations. "The number of preposterous theories, however," observes a distinguished writer, "should not create an antipathy to the term, nor must a panic terror of them drive us from the sacred abodes of philosophy. To be hurt with the imperfect and puerile commencement of reasoning in physic, and to relinquish the hopes of rational theory, is to be offended with the prattle of infancy, and to expect nothing better from maturer age." A logical conclusion is as convincing and as irresistible as a mathematical demonstration. In mathematics we say that the parts are equal to the whole, that two parallel lines can never cross each other, and that the sides of an equilateral triangle are equal to each other. And so in logical propositions —if the premises be equally correct, the conclusion is as inevitable. The only difficulty is in establishing the truth of the premises. In the treatment of disease the intelligent physician often perceives the existence of a series of facts which must

inevitably lead to a certain injurious result, but by the timely interposition of appropriate causes he breaks the chain of morbid sequences and averts the threatened disaster. And so, also, it is impossible to trace the multiplied relations of medicines to various forms of disease without the highest exercise of the inductive process. Were this not so, the well-instructed nurse, by attending the receptacles of the sick, might surpass the most enlightened and highly educated physician. We are certainly not to underrate the humbler employment of observation and experience; but if experience be all that is necessary to the successful practice of the profession, then medicine should no longer be studied as a science. It should at once be regarded as a mere trade, a low and vulgar art. If experience be sufficient, why establish colleges, why light up the camp-fires of science, why heat up the crucibles of the laboratory, or pass through the more disgusting orgies, if you please, of the dead-room? No, experience is not sufficient. In the language of the eloquent Dr. McClung, of Virginia, "As well might we compare the flutterings of the meanest and most groveling bird with the well sustained flight of Joves' own imperial eagle; as those slow processes of a vulgar mind by which facts are collected and observed, with the vigorous sallies of speculative genius, which seize truth as it were by intuition, and reveal it in a flood of light of celestial brightness." What would our experience be without the benefits of inductive reasoning? What would it be in small pox, in scurvy, in scrofula, in hygiene which maintains our health and lengthens out the cord of existence, or prophylaxis, which shields us from distempers and defends us against "the pestilence which walketh in darkness and the destruction which wasteth at noonday." No, I repeat, experience is not sufficient. Learn, young gentlemen, to think, to theorize, to speculate, but be sure you are guided by the severest induction. Medicine is a science of observation and induction. Let us then take our stand upon this platform, and push our discoveries further and still further. "And though our gropings may be like Homer's Cyclops round his cave, we

shall ultimately come to the light of a more gorgeous day." Stimulated by the success of those who have gone before us, and whose rich legacy we now so abundantly enjoy, let us go on to still higher achievements. We live in a country and at a time peculiarly calculated to excite our ambition, and cheer us on in the acquisition of knowledge. The light of philosophy is blazing all around us; the world in all its departments seems to be gathering itself up for some stupendous effort. Let us not linger behind; let us rise higher and still higher, like the eagle—

> "Proudly careering his course of joy,
> Firm on his own mountain vigor relying,
> Breasting the dark storm, the red bolt defying.
> With his wing on the wind and his eye on the sun,
> He swerves not a hair but bears onward, right on."

And to you young gentlemen, who have honored us with your confidence, I repeat what I said on a former occasion. I, in behalf of my colleagues, extend to you a hearty welcome to University halls, and to the hospitality of the "City of Rocks." You have left the endearments of home, and have sought an institution of medical learning which has sprung up amidst rivals, firm and strong, in the vigor of manhood, and enwreathed with honors won by years of patient endurance and honest toil; rivals whose long lines of alumni sparkle along the waters of the Mississippi, and the savannahs of the sunny south, whose renown has filled the page of history, and lingers upon the tongues of a thousand living, moving, illustrious monuments. Having seduced you from the glittering pathways which lead up to other established fountains of knowledge, we should prove false to you, false to a distinguished profession, false to suffering men, did we fail to conduct you safely and certainly up the hill of medical science. We should prove unworthy, eminently unworthy of the confidence reposed in us, if it should turn out that we had made representations or held up inducements which have decoyed you from truer sources of medical

knowledge. These thoughts excite the most painful convictions, not only of the responsibilities which we have assumed, but of the high obligations which we are under to you, and, especially, to the cause of humanity.

You have turned your attention to the most wonderful subjects which can possibly engage finite minds. You have come here to contemplate health and disease, life and death; to penetrate the laws by which these relations are connected, and you expect to interpose the knowledge here secured for the preservation of the one and destruction of the other. To attain this position is the highest achievement of our art. I need not tell you that to gain this distinction, you must be laborious, studious and self-sacrificing. The mind must be fixed, concentrated upon them. It would be a painful thing to us if any of you should go away from these walls to disgrace the profession. Far better would it be for you and the cause of humanity, to return to your fields and to your merchandise.

You are now, most of you, far away from those whose duty it has been to guide you along the slippery paths of youth. You are here in the midst of a gay city, with all its seductive charms and temptations, at a time of life of all others the most susceptible, and unless you set your faces as brass against its allurements, you will be overwhelmed by vice, if not disgraced by crime. Those of you who are religious should not fail to discharge your duties because you are away from home, and those of you who are not should remember that a physician is bound to be a moral man and a gentleman. Your punctual attendance in the lecture room will soon give evidence of your character, and establish the estimation in which you are to be held by your teachers, as well as by this community. I hope that nothing shall transpire during your temporary stay here which shall disturb the agreeable relation which to-day has been formed, or which shall blight your anticipations of future usefulness and renown.

And now we launch our boat once more on the dark waters and say, sail on:—

"Fear not each sudden sound and shock,
'Tis of the wave and not the rock;
'Tis but the flapping of the sail,
And not a rent made by the gale.
In spite of rock and tempest roar,
In spite of false lights on the shore,
Sail on, nor fear to breast the sea."